

Amendment Under 37 C.F.R. § 1.111
Serial No. 09/765,639
Sughrue Ref: Q62740

REMARKS

Formal Matters

As an initial matter, Applicant thanks the Examiner for acknowledging the claim to foreign priority and confirming receipt of the priority document.

However, the Examiner has not forwarded an initialed copy of the PTO-1449 form submitted with the Information Disclosure Statement filed January 22, 2001. Therefore, for the Examiner's convenience, Applicant has enclosed a copy of the PTO-1449 along with a copy of the Information Disclosure Statement, a copy of the PTO-1149 form, and a copy of the date stamped post card and respectfully requests the Examiner to consider and initial the references listed on the PTO-1449 form.

The Examiner has objected to the drawings. As an initial matter, the Examiner has objected to Fig. 3 because of minor typographical errors. Applicant has corrected Fig. 3, as attached.

In addition, the Examiner has objected to Figs. 1, 2, 4A, 5, 6, 7, and 14, alleging that these Figures only show that which is old. In response, Applicant has amended these figures to indicate "PRIOR ART."

The Examiner has noted that the phrase "imaginary light" is considered has been interpreted as emitted light. In response, Applicant submits that this term refers to imaginary, or hypothetical light, that would be emitted from a light source based on the light source position information.

Claims 1-12 are all of the pending claims. Claims 1, 6, and 9 are independent claims.

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Claim Rejections Under 35 U.S.C. § 103

Claims 1-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishikawa et al. (US 5,836,668) in view of Biermann et al.'s article "Press Release Archive." Applicant respectfully traverses this rejection.

Claims 1-5

Ishikawa discloses a method of forming a reflection surface in which the basic reflection surface R_0 is set by evaluating several preliminary set basic reflection surfaces R_0' . A first preliminary reflection surface R_0' is divided based on contours $I_{\theta i}$ of equal light incident value. For example, as shown in Figs. 5 and 6 of Ishikawa, the preliminary reflection surface R_0' is divided into areas based on the angle of incidence. The reflecting region 5 includes areas that no light reaches. If the reflecting area of the preliminary reflection surface R_0' only includes areas with "good" (i.e. $< 80^\circ$) incident angles, then the reflecting area can be used as the final basis reflection surface R_0 . However, if the reflecting area of the preliminary reflection surface R_0' includes area that are not considered "good", then a new preliminary reflection surface R_0' is evaluated. See Ishikawa at 6:43-7:57.

Once a basic reflection surface R_0 is determined, then a plurality of paraboloids of revolution P_1, P_2, P_3 are set and a plurality of closed curves C_1, C_2 , and C_3 are formed intersecting the paraboloids. See Ishikawa at 5:57-6:2. The result is a reflection surface R in the form of multiple paraboloids. See Ishikawa at 1:48-50.

The Examiner asserts that Ishikawa does not teach using the method for evaluating the reflection performance of vehicle lamp. Therefore, the Examiner looks to Biermann's discussion

of an optical modeling program. However, Applicant submits that Biermann does not make up for the deficiencies in Ishikawa, which are discussed below.

With respect to claim 1, Applicant submits that the combination of Ishikawa and Biermann does not teach or suggest the claimed method of evaluating reflection performance of a reflecting mirror in which the design information represents “a plurality of reflecting basic surfaces which constitute the mirror.”

It appears to be the Examiner’s position that Ishikawa’s basic preliminary set basic reflection surfaces Ro' correspond to the recited “reflecting basic surfaces which constitute the reflection mirror,” and that the areas based on contours $I\theta_i$ of equal light incident value correspond to the recited “plurality of areas” into which “each of the plurality of areas is divided.”

However, Ishikawa’s preliminary reflection surface Ro' does not “constitute the reflecting mirror.” Instead, the preliminary reflection surface Ro' is a curved surface that is used as a basis to form a reflection surface R . That is, Ishikawa’s preliminary reflection surface Ro' is similar to the free formed surface 20 described in the present specification, and does not correspond to the “a plurality of reflecting basic surfaces which constitute the mirror.” *See* Ishikawa at e.g., Fig. 8.

Furthermore, as discussed above, if a preliminary set basic reflection surface Ro' is found to include areas that are not considered “good,” then another preliminary reflection surface Ro' is evaluated. That is, even assuming *arguendo* that Ishikawa’s preliminary reflection surface Ro'

constitutes the reflecting mirror, only a single preliminary reflection surface Ro', and not a plurality of surfaces, is evaluated.

In contrast, claim 1 requires that the plurality of reflecting basic surfaces "constitute a mirror." Therefore, although the language used to describe Ishikawa's preliminary set basic reflection surfaces Ro' is similar to that used in claim 1, Ishikawa's preliminary reflection surfaces Ro' cannot correspond to the recited plurality of reflecting basic surfaces.

As such, Applicant respectfully requests that the Examiner withdraw the rejection of independent claim 1. In addition, Applicant respectfully requests that the Examiner withdraw the rejection of dependent claims 2-5 at least because of their dependency from claim 1.

Claims 6-12

In addition, with respect to independent claim 6 and 9, Applicant respectfully requests that the Examiner to withdraw the rejection for the reasons discussed above with respect to claim 1. That is, Applicant submits that the combination of Ishikawa and Biermann does not teach or suggest the claimed evaluation system or computer readable storage medium in which the design information represents "a plurality of reflecting basic surfaces which constitute the mirror."

Furthermore, Applicant respectfully requests that the Examiner withdrawn the rejection of dependent claims 7, 8, and 10-12 at least because of their dependency from claim 6 or claim 9.

New Claims

In addition, new dependent claims 13-15 have been added in order to provide additional claim coverage. Applicant respectfully submits that these claims are fully supported by the *non-limiting* embodiment shown at, for example, Figures. 8, 10, and 12 of the original specification.

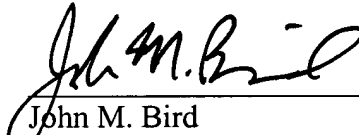
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Applicant respectfully requests the Examiner to allow the new claims at least because of their dependency from one of independent claims 1, 6, and 9.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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23373

CUSTOMER NUMBER

Date: September 3, 2004

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AMENDMENTS TO THE DRAWINGS

Figures 1, 2, 4A, 5-7 and 14 have been labeled "PRIOR ART"; and

Figure 3 has been amended so that the word "CERATE" has been replaced with the word
--CREATE--.

Attachment: Replacement Sheets